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WHAT IS CLAIMED IS:

1. A process for making a disposable wearing article comprising a step of securing an elastic member of an elastically stretchable in a longitudinal direction to sheet material of said disposable wearing article using an adhesive, said process further comprising:

said step of securing the elastic member to said article includes a step of applying said adhesive to said elastic member on a peripheral surface thereof in such a warmer as to make said adhesive draw substantially a continuous line and then securing said elastic member to said sheet material;

said continuous line drawing curved line on x - y plane defined by an x-axis which extends in the longitudinal direction and a y-axis being orthogonal to said x-axis and corresponding to a developed view of the peripheral surface of said elastic member so that said curved line advances in the direction of said x-axis so as to undulate about said x-axis in the direction of said y-axis; and

- a height of the undulation being substantially equal to or larger than a circumferential length of said elastic member.
 - 2. The process according to Claim 1, wherein said curved line

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undulates, as viewed in said developed view, substantially with a uniform cycle and an amplitude in at least a partial section of said curved line in the direction of said x-axis.

- 5 3. The process according to Claim 1, wherein said elastic member is bonded with or without extension to said sheet material.
- 4. The process according to Claim 1, wherein said curved line includes, as viewed in said developed view, sections curved in an S-shape or an inverted S-shape.
 - 5. The process according to Claim 1, wherein said wearing article is one of a disposable diaper, disposable training pants, a sanitary napkin, a disposable gown and disposable trousers.